Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Form PCT/IPEA/416
346330D21230		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/FR2004/001907	19.07.2004	18.07.2003

International Patent Classification (IPC) or national classification and IPC

A61K35/78, A61K31/56, A61K7/48, A61K7/26, A61P19/02, A61P1/02

Applicant

LABORATOIRES EXPANSCIENCE

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☐ *(sent to the applicant and to the International Bureau)* a total of _____ sheets, as follows:

      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s))

      _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/FR2004/001907

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

☐ international search (Rule 12.3 and 23.1(b))

☐ publication of the international application (Rule 12.4)

☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-28 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

nos. 1-13 as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* _____ received by this Authority on _____

nos.* _____ received by this Authority on _____

☒ the drawings:

sheets 1/3-3/3 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/FR2004/001907

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-13	YES
	Claims		NO
Inventive step (IS)	Claims	1-13	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

1. In the present report, reference is made to the following documents:

D1: XP002286368;
D2: WO-A-03/055462;
D3: WO-A-00/62789;

2. NOVELTY (PCT Article 33(2))

2.1 The present application fulfils the requirements set forth in PCT Article 33(1) because the subject matter of claims 1-13 complies with the requirement of novelty defined in PCT Article 33(2).

Document D1 describes the use of a plant extract derived from *Lupinus albus* (LU105) in the treatment or prevention of gingival connective tissue degeneration and periodontal diseases such as gingivitis and periodontitis (see the whole document). LU105 designates lupin peptides that are hydrolysed fractions of hydrolysable lupin

proteins. The lupeol described and used in the present application is, on the other hand, a water-insoluble triterpenic alcohol. It follows that lupin peptides (LU105) and lupeol, which are produced using two different methods, are substances that have no similarity in terms of structure and cellular action. Neither one can contain the other. As a result, lupeol and LU105 (lupin peptides) are two separate substances (see documents D2, page 6, lines 29-31; and D3, page 6).

The subject matter of claims 1-13 is, therefore, novel under the terms of PCT Article 33(2).

3. INVENTIVE STEP (PCT Article 33(3))

3.1 The present application fulfils the requirements set forth in PCT Article 33(1) because the subject matter of claims 1-13 involves an inventive step as defined in PCT Article 33(3). There is nothing in the prior art to suggest the use of a lupeol-rich extract in the treatment or prevention of connective tissue degeneration.

As a result, the subject matter of claims 1-13 involves an inventive step as defined in PCT Article 33(3).

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

4. INDUSTRIAL APPLICABILITY (PCT Article 33(4))

4.1 Claims 1-13 comply with the requirement of industrial applicability defined in PCT Article 33(4).